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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/076,317	05/11/98	BIRKESTRAND	0 102047-0003

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EXAMINER

LE.D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 10/20/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/076,317

Applicant(s)

Birkestrand

Examiner

Dang Dinh Le

Group Art Unit

2834



☒ Responsive to communication(s) filed on Sep 3, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-41 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 1-14, 17-19, and 22-26 is/are allowed.

☒ Claim(s) 27 and 37 is/are rejected.

☒ Claim(s) 15, 16, 20, 21, 28-36, and 38-41 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Sep 3, 1999 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 38-42, which are renumbered to 37-41, have been considered but are moot in view of the new ground(s) of rejection.

Response to Amendment

2. The change requested to claim 32 is incorporated into claim 31 because claim 32 has been renumbered to claim 31 for reasons below.

Claim Objections

3. Claim 1 is still objected to because of the following informalities:
 - a. Claim 1, line 17, replace "shaft" with --shafts --. Appropriate correction is required.
4. Claims 15-16, 20-21, 28-36, and 38-41 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims (15, 20, and 28) cannot depend on themselves. Accordingly, the claims have not been further treated on the merits.

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There is no claim 13 in the disclosure. Therefore, claims 14-37 are renumbered to 13-36. Accordingly, new added claims 38-42 are renumbered to claims 37-41.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 27 and 37 (which were claims 28 and 38) are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US Patent No. 5,581,136) in view of Rockland.

Regarding claim 27, Li shows a motorized wheel hub assembly comprising:

* a sealed motor section having first and second end walls (180, 190) and a side wall extending between the end walls, a first shaft (40) extending from the first end wall and a rotary second shaft (90) extending from the second end wall coaxial to the first shaft, and

* a gear reduction section (100) adjacent to the second end wall, the gear reduction section including a pinion (110) at the end of the rotary shaft, a plurality of planet gears (120, 130, 140) rotatably mounted between the second end wall in meshing engagement with the pinion (110), a third shaft (150) connected to the second end wall, the third shaft being separated from

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but coaxial to the first and second shafts, a hub having an interior surface closely surrounding the motor section and planet gears and being rotatably coupled to the first shaft and third shafts.

Li does not show a ring gear formed at the interior of the hub in meshing engagement with the planet gear so that when the second shaft rotates at a selected speed, the hub rotates relative to the first shaft and third shafts at a lesser speed. Li forms his ring gear at the exterior surface of the motor housing.

Rockland teaches to form the ring gear in the hub side wall for the purpose of reducing parts. See Rockland Servo Wheel Design Features, page 4, Integrated Output Stage section.

Since Li and Rockland are both from the same field of endeavor, the purpose disclosed by Rockland would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the ring gear in the hub side wall as taught by Rockland for the purpose of reducing parts.

Regarding claim 37, Li shows a motorized wheel hub assembly comprising:

- * a sealed motor section having first and second end walls (180, 190) and a side wall extending between the end walls, a first shaft (40) extending from the first end wall and a rotatory second shaft (90) extending from the second end wall coaxial to the first shaft, and

- * a gear reduction section (100) adjacent to the second end wall, the gear reduction section including a pinion (110) at the end of the rotary shaft.

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Li does not show a gear support connected to the second end wall, a plurality of planet gears rotatably mounted between the second end wall and the gear support in meshing engagement with the pinion, a hub having an interior surface closely surrounding the motor section and planet gears and being rotatably coupled to the first shaft, and a ring gear formed at the interior of the hub in meshing engagement with the planet gear so that when the second shaft rotates at a selected speed, the hub rotates relative to the first shaft at a lesser speed. Li forms his ring gear at the exterior surface of the motor housing.

Rockland teaches to connect the gear support to the second end wall and to form the ring gear in the hub side wall for the purpose of reducing parts. See Rockland Servo Wheel Design Features, page 4, Integrated Output Stage section.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to connect the gear support to the second end wall and to form the ring gear in the hub side wall as taught by Rockland for the purpose of reducing parts.

Allowable Subject Matter

7. Claims 1-14, 17-19, and 22-26 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: The record of prior art does not show a motorized wheel hub assembly having an axis and comprising a first shaft extending from the first wall along the axis, a second shaft extending from the rotor

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along the axis away from the first shaft and through the second wall, means for connecting the third shaft to the second end wall so that the third shaft is rotatably fixed to the first shaft and extends along the axis away from the first and second shafts such that all the shafts are collinear but separate from one another.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang Dinh Le whose telephone number is (703) 305-0156.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. The fax number for this group is (703) 305-3431 and 305-3432.



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Dang Dinh Le

October 15, 1999